EXTENDED EFFECTS OF PARTICIPATION IN A SEMESTER-LONG OUTDOOR LEADERSHIP TRAINING PROGRAM

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Abstract

While many adventure programs offer opportunities to develop technical and outdoor skills such as orienteering, rope management, and backpacking skills (Shooter, Sibthorp, & Paisley, 2009) research has demonstrated that participating in an adventure program often results in the development of interpersonal skills such as communication, decision-making, and problem solving (McKenzie, 2003; Raiola, 2003; Sibthorp, Paisley, & Gookin, 2007). Interpersonal skills are beneficial to both personal and professional development and can translate into success in the classroom and the workplace (Gass, Garvey, & Sugerman, 2003; Shooter, Sibthorp, & Paisley, 2009). However, the long-term retention of technical and interpersonal skills as a result of participating in an adventure program has received limited research attention.

The purpose of this study was to examine the effects of participation in the CORE program at IU through a longitudinal analysis. Specifically, the aim of this study was to analyze the retention of technical and interpersonal skills, and attitudes of past CORE program participants and identify the impact these skills have on areas such as personal and professional development.

The CORE Program is a unique outdoor adventure and education program that blends classroom learning and fieldwork to provide its participants with a broad range of experiential learning opportunities. The past research done on the CORE program has typically examined the effects of the program immediately after its conclusion.

This study adopted a self-administered retrospective pre-post questionnaire that asked CORE alumni to reflect and rate their skill level on a 5-point Likert scale on three time points: before participation in CORE, right after completion of the CORE program and their current level of skills. Skills examined included technical skills such as knots, climbing, and orienteering

and interpersonal skills such as problem solving, group management, and decision-making. The results of this study contributed to a better understanding the impacts and outcomes of the CORE program.

Chapter 1

Introduction

Outdoor adventure programs can be a recreational outlet, educational platform, or even a therapeutic medium that allow each participant to take away different skills and experiences (Webb, 1999). According to one of the most cited studies in outdoor adventure education, Hattie and his colleagues categorized the outcomes of adventure programs into leadership, self-concept, academic, personality, adventuresome, and interpersonal development (Hattie, Marsh, Neill, & Richards, 1997). Although outcomes of adventure programs have garnered a lot of attention in research, little has been done to understand how these programs accomplish these outcomes.

Gaining insight into the extended effects of outdoor adventure programs on participants could contribute to both an evaluation of the program and the understanding of the overall effectiveness of adventure programs. Although this study focused on a specific adventure program, the implications of the study supports the need for additional research in the adventure program field regarding overall program evaluation and impact. Contributing more research on adventure programs will help dissuade any doubts about the purpose and impact of adventure programs.

This study specifically focused on the Conservation and Outdoor Recreation Education (CORE) program at Indiana University and the skill retention of its past participants. Little research has been done on the outcomes and retention of skills of past participants of the CORE program. Prior research that has been conducted has focused on topics such as leadership development and resilience (Ballard, Shellman, & Hayashi, 2008; Ewert, & Yoshino, 2007). The skills that were explored in this study were categorized as technical and interpersonal, both of which contribute to personal and professional development (Shooter, Sibthorp, & Paisley, 2009).

Technical skills, or hard skills, “are competencies in the actual adventure activities or outdoor pursuits being led” (Priest, 1999). CORE program participants have the opportunity to develop technical skills that include backcountry hiking and camping, rope site management, and paddling (Meier, 1996). Interpersonal skills, or soft skills, “are defined as the human relations competencies needed to guide personal growth and achieve group unity” (Knapp, 1999). Throughout the semester, CORE program participants develop interpersonal skills that include counseling, facilitation, teaching, and relationship building (Shooter, Sibthorp, & Paisley, 2009). Technical and interpersonal skills are developed throughout the semester within the classroom, during field experiences, and ultimately put to the test during final expedition.

The author of this study became interested in this subject after participating in the CORE program in the spring of 2014. The unique venue of the program provided the author with valuable learning experiences and raised the question of why more research has not been conducted to evaluate the program. By providing an analysis and evaluation of the CORE program, the author hopes to provide evidence as to the impact of the program and solidify the program outcomes.

Statement of the Problem

Prior research has not evaluated the skill retention of CORE program participants. It is unclear to what extent past participants retain skills and the impact the CORE program has on the retention of both technical and interpersonal skills. The lack of research contributes to a void in evaluating the outcomes and impacts of the CORE program.

Purpose of the Study

The purpose of this study was twofold. First, it served to analyze the skill retention among past participants of the CORE program, specifically the technical and interpersonal skills. Second, the study evaluated the impact the CORE program had on the personal and professional development of past participants. This study specifically benefited the CORE program by providing an analysis and evaluation of its program outcomes, while also contributing to the overall research of the outcomes and impacts of adventure programs.

Significance of the Study

Limited research has been done on the CORE program at Indiana University. What little research is available has not focused on the skill retention of participants, but rather on skill development, specifically leadership skills. Analyzing the skill retention of past participants provides the program with a more concrete idea of the impact the program has on its participants. A need therefore exists for more in depth research of the CORE program.

Previous research on the CORE program has generally collected semester-long data from participants that range from eleven to eight years ago. These studies mostly focus on environmental beliefs, gender differences, and salience (Ewert, 2004; Voight, 2004; Ewert, Voight, Calvin, & Hayashi, 2007). Although this research provides insight into the effects of the CORE program, it does little to clearly outline the outcomes for participants. In terms of studies that focus on program participants, their subjects involve learning styles and leadership development (Shellman & Ewert, 2004; Ballard, 2006). The aforementioned studies come close to addressing the need for research regarding participant outcomes, but lack focus of long-term participant development and impact.

This research provides long-term findings of the CORE program, rather than semester-long findings. Collecting retrospective data "may provide insight into factors associated with lasting changes from adventure programs versus factors that may only produce short-term changes in participants' lives" (Gass, Garvey, & Sugerman, 2003, p. 35). Obtaining data from participants years after they have completed the program provides better insight in to the retention of skills and impact of the program over time. Gathering data from participants that range over the nineteen-year history of the program offers a more comprehensive inventory of the impact of the program than a semester-long study.

Evaluating the CORE program by understanding the impact it has on its participants is not only important for the program, but also for the field of adventure programming. There has been a call "for accountability information (particularly in light of some recent deaths and disasters which have occurred during some adventure programs), and one desirable outcome of these edicts might be enhanced quality of research on adventure program" (Hattie, Marsh, Neill, & Richards, 1997, p. 45). Providing more reliable and accountable research on adventure programs creates a more stable foundation for future programs to work from, as well as solidifies the impact current programs are having on participants. Although the CORE program has been running for nineteen years at IU there is always a need for further and better research, the same can be said for any adventure program.

This study focused on the retention of skills of past participants, specifically technical and interpersonal skills. Although these skills are usually referenced in terms of outdoor leadership, this study looked at technical, or hard skills, and interpersonal, or soft skills, with regards to the personal and professional development of past participants (Shooter, Sibthorp, & Paisley, 2009). The CORE program is an outdoor leadership experience, but not every

participant ends up in the outdoor adventure field. For this reason, it was important to investigate how technical and interpersonal skills were retained and impact the personal and professional development of participants in order to gain insight of the overall impact of an outdoor adventure program.

The significance of this study benefits the CORE program by providing evaluation, but this study has a larger impact on the field of adventure programming by focusing on the impacts of programs on the professional and personal lives of participants. There is plenty of research regarding participant development, but their focus is primarily on specific skill development, such as communication, self-efficacy, and leadership (Hattie, Marsh, Neill, & Richards, 1997; Gass, Garvey, & Sugerman, 2003; McKenzie, 2003; Sibthorp, Paisley, Gookin, 2007). In order to provide more impactful and reliable testament to the credibility of adventure programs, there is a need for more in depth results and outcomes of such programs. This study hopes to provide those results by taking a look at the skill retention of past participants and how those skills have impacted their personal and professional development. In this sense, looking at these particular skills and impacts can resonate with fields other than outdoor adventure because of the diversity of participants and where they end up after the program.

For instance, the healthcare and business industries have experienced difficulty in providing training for employees with regards to soft skills (Caudron, 1999; Ashbaugh, 2003). The case has always been hard to make for soft skills, but executives are beginning to understand why skills such as trust, adaptability, and confidence are necessary for their employees to possess (Caudron, 1999). Leaders of organizations and companies outside of the recreation field have begun to realize that interpersonal skills create a more open working environment that is more

likely to retain employees (Ashbaugh, 2003). This study helps contribute evidence as to the importance of interpersonal skills, especially with regards to professional development.

There is a harder case to make for the importance of technical skills outside of the recreation and outdoor adventure fields. This study does not make a case for technical skills, rather, it helps dissuade the belief that they are more important than interpersonal skills. Evidence needs to be provided in order to break the notion that hard skills are more important or harder to achieve than soft skills (Sibthorp et al., 2007). As the authors suggest, a movement towards the terms technical and interpersonal can help restore balance to the need for both sets of skills. Studying a program like CORE, which balances technical and interpersonal skills in its programming, solidifies the importance of the program and the outcomes it has for its participants.

Not only is evaluation important for contributing to the need and purpose of the program, it can also provide a closer look as to the productivity of the programming. In order for a program to be intentionally designed and implemented, its outcomes and participant development must be investigated (Sibthorp et al., 2007). If the CORE program advertises and operates on the assumption that participants will develop technical and interpersonal skills, then the programming should reflect and accommodate such outcomes. This study can be used to identify any need for program redesign or implementation based on the outcomes for participants. Even though experiences will vary for past participants, as the program has developed throughout its nineteen-year existence, the different experiences should still yield similar results with regards to skills and personal and professional development. Any drastic difference should be examined more closely to determine whether or not there was a disconnect

regarding programming. The ultimate goal is to contribute useful research to the CORE program and the field of outdoor adventure programs.

Delimitations

The study is delimited by the following:

1. The participants were past participants of the CORE program at Indiana University Bloomington.
2. Skill retention refers to the recall and practice of technical and interpersonal skills.
3. This study examined technical and interpersonal skill retention, not leadership or skill development.

Limitations

The study had the following limitations:

1. The researcher was not able to contact all past CORE program participants for the study.
2. Participation in the study was voluntary, therefore generalizability of the results beyond the sample will be difficult.
3. Participants self-reported their skill retention, which meant honesty of answers was assumed.
4. Participants may not have been able to articulate what they learned from the CORE program.

Assumptions

The study was based on the following assumptions:

1. Technical and interpersonal skills are the major outcomes for participants of the CORE program.
2. Participants constitute a relatively homogenous group, comparable in terms of experiences gained from the CORE program.
3. Participants were able to honestly and accurately express their experiences and knowledge.

Hypotheses

The study was designed to test the following hypotheses:

1. The retention of interpersonal skills will be greater than the retention of technical skills among past CORE program participants.
2. The reported impacts of technical and interpersonal skills will include personal and professional development among past CORE program participants.

Definition of Terms

CORE – The Conservation and Outdoor Recreation Education program is a semester-long outdoor adventure program at Indiana University Bloomington that combines classroom learning and experiential fieldwork to provide a unique learning environment (Meier, 1996).

Technical Skills – Competencies in the actual adventure activities or outdoor pursuits being led (Priest, 1999).

Interpersonal Skills – The human relations competencies needed to guide personal growth and achieve group unity (Knapp, 1999).

Chapter 2

Literature Review

This chapter explores the current literature available in order to understand the themes of this study. First, similar outdoor adventure programs, such as Outward Bound and the National Outdoor Leadership School are explored. Second, longitudinal studies are examined to provide insight into the need for and the benefit of such studies. Finally, the long-term effects of similar outdoor adventure programs on participants are explored, which is important in solidifying the purpose and impact of these programs.

Outdoor Adventure Programs

Programs such as Outward Bound (OB) and the National Outdoor Leadership School (NOLS) are looked to by many outdoor professionals for setting the industry standards in areas such as programming, leadership, and safety. In order to maintain their reputation and reliability, OB and NOLS conduct a plethora of research on topics regarding participant outcomes, such as self-esteem/confidence, leadership, and group development (Goldenberg, McAvoy, & Klenosky, 2005; Goldenberg, & Soule, 2014; Goldenberg, Soule, Cummings, & Pronsolino, 2010; Sibthorp, Paisley, Gookin, 2007). These studies also provide OB and NOLS with more insight into the development of their participants and their programs. Although these programs provide a model for outdoor adventure programming, it is also important for other programs to look to them for models of research.

The CORE program is modeled off of OB and NOLS, reviewing research conducted by these prestigious outdoor institutions provides insights relative to the development of their programs. Goldenberg and Soule (2014) conducted a means-end study of OB and NOLS

participants four years after their completion of the programs. The authors found that participants frequently mentioned transference, being challenged, and sense of accomplishment as values associated with their participation. These findings contributed to the relationship between specific program elements and participant outcomes. In addition, the findings solidified or contradicted the connection between participants and the intended outcomes of the program. Being able to measure participant outcomes and connect those findings with the stated goals of the program is essential to ensuring that the program is effective.

Goldenberg et al. (2005) produced a similar study, but focusing only an OB course. Their findings were similar in terms of values associated with the experience and what the participants gained as a result. However, the authors took the findings and discussed in greater detail how they could impact the program. For instance, the authors point out that these findings can positively influence grant funding, donations, marketing, and course effectiveness, and can help in regards to training staff and programming. Identifying aspects that are ultimately affected by evaluation of participant outcomes is important in solidifying why research is necessary in the first place.

Goldenberg et al. (2010) performed another means-end study on both OB and NOLS courses. The original courses took place in 2006, with follow up interviews in 2007, 2008, and 2009. Similar to the aforementioned means-end studies, the authors asked participants to identify three or four course components and discuss why they were important using the laddering technique. The authors found that participants frequently mentioned group, expedition, interactions, transference, sense of accomplishment, and new perspective, among many other attributes, consequences, and values. These findings suggest that participants often find a way to transfer the program outcomes into their every day lives years after their

completion. This study, along with Goldenberg's other studies, demonstrates that understanding the consequences of course components is important in regards to programming. Outdoor adventure programs should gather research on their past participants in order to better design and tailor programming in order to achieve or highlight specific participant outcomes.

Sibthorp et al. (2007) conducted a study examining participant development within NOLS programs during July and October of 2004. Using a retrospective pre and posttest with a Likert-type scale, the authors measured six program outcomes: communication, leadership, small group behavior, judgment in the outdoors, outdoor skills, and environmental awareness. The authors looked at the impact of eight predictor variables on the perceived gains in the six program outcomes. Findings indicate that personal empowerment and previous expedition experience showed significant changes in all six outcomes, while the other four variables had slightly less significant perceived gains. This study encourages testing and evaluating outdoor programs in order to build program theory and extend development and research into other organizations. In terms of program outcomes, Sibthorp et al. (2007) found that "fostering a perception of ownership in, and responsibility for, the adventure-based programs seemed to increase perceptions of development". Empowerment, according to the authors, is essential to participant learning and making programs more meaningful.

These studies provide an example of how and why an outdoor adventure program, such as CORE, should be conducting research on its past participants. From organizations such as OB and NOLS, we have learned that commonly expressed participant outcomes include empowerment and transference, which are important findings that ultimately support the goals of the programs (Goldenberg et al., 2005; Goldenberg et al., 2010; Goldenberg & Soule, 2014; Sibthorp et al., 2007). The variation in methodology and findings of these studies proves that

although every program and course is different, the evidence supports the overall goals of outdoor adventure programs.

Longitudinal Studies

Long-term and follow-up studies are important in understanding participant outcomes and their impact over time (Asfeldt and Hvenegaard, 2014; Davis-Berman & Berman, 2012; Gass, Garvey, & Sugerman, 2003; Goldenberg et al., 2010; Hattie, et al., 1997). Longitudinal studies involve data collection from the same participants on the same topics in order to track changes over time (Goldenberg et al., 2010). This approach gives way to drawing conclusions about the program's impact over time. Obtaining longitudinal data from program participants provides a perspective on how outdoor adventure programs are experienced and understood.

Examining studies with a similar focus on impacts over time will help us better understand the role of time and its influences on the skill retention of past participants of CORE. Davis-Berman and Berman (2012) completed a study that contacted participants of a wilderness therapy program twenty years later. The authors discovered there was a reoccurring theme of personal development among the past participants. In terms of this study, personal development included improvement in relationships, self-confidence, lessons to share with others, and transference of skills into real life situations. For instance, one participant's reflection on the trip helped her realize that if she could survive the trip, she could do anything. Overall, the participants expressed that the program was a valuable experience and would like others to have the same experience, especially their children. The participants did not state that the event was life altering, but nonetheless, it did have lasting impacts on them two decades later.

This study also pointed out the often-overlooked element of individual growth. Often outdoor program participants are lumped into group outcomes and goals, which is not always the

case. Although they may be working as a group to achieve a common outcome, they do not always take away the same things or feel as if the group contributed to their learning. The authors note that many of the participants they contacted reflected on the fact that it was never about the group experience, and they often could not remember most of the people they travelled with during the program. Recognizing individual experiences as a component of an outdoor adventure program is important to explore in research in order to better understand program outcomes and participant experiences.

Gass et al. (2003) also performed a longitudinal study, which contacted past participants of a wilderness college orientation program multiple times, including seventeen years after the participants had completed the program. Participants reported to the authors that the experience impacted their undergraduate experience and contributed to decisions made post-college. One participant mentioned that it changed her path in regards to decisions about her major and social involvements, while another commented, "'I've incorporated it throughout my life in the past seventeen years'" (Gass et al., 2003). This study also revealed the development of personal values skills, which is commonly found in outdoor adventure programs, but was not a major objective of the wilderness program examined in this study. For this study, personal values were identified by the participants as the beliefs, assumptions, and biases about the world and other participants. This finding is important to note because it points to the fact that program participants may achieve goals and values that are not put forth by the program or its leaders.

Asfeldt and Hvenegaard (2014) conducted a study similar to the one being proposed. The authors contacted all participants of a University of Alberta expedition from 1993-2007 and invited them to complete a self-administered questionnaire inquiring about participants' perceptions of their learning and how it has changed over time. Participants noted the impact the

program had on their personal and professional development, which included confidence, development of personal skills (e.g. communication and learning), development of job skills (e.g. fieldwork skills, networking), and career path guidance (e.g. learning what they want to do/who they are). This study also discussed the change in the perceived learning of the participants over time. Participants stated that they became more self-aware over time by continuing to learn lessons from the experience, as well as, developing a greater appreciation of the experience. These findings attest to the power and impact an outdoor adventure experience can have on participants years after the fact.

Time is an important factor in these studies and the study being proposed. The passage of time for participants of outdoor adventure programs is an important element in understanding the impact adventure programs have on their participants. For example, anywhere from twenty-one to seven years had passed when Asfeldt and Hvenegaard (2014) contacted the subjects of their study. That window of time allowed participants to reflect on their experience and really understand how it has developed and impacted different areas of their lives. These studies have allowed a significant amount of time to pass and are still able to find participants whose lives have been impacted by their experience. Longitudinal studies provide strong evidence for the importance and need for adventure programs and similar research. The passage of time in these studies exposes more significant participant outcomes and transference of experiences on the personal and professional development of participants (Asfeldt and Hvenegaard, 2014; Davis-Berman & Berman, 2012; Gass et al., 2003).

Performing these evaluations and follow-up studies proves essential to understanding the outcomes for participants and how programs and leaders can help others achieve these goals and market their program effectively. Understanding what participants will take away from the

program allows for more focused programming and marketing of outdoor adventure programs (Asfeldt and Hvenegaard, 2014; Gass et al., 2003). Demonstrating the impact a program has over time through participant testimony is a powerful affirmation. If time strengthens the influence a program has on its participants, then more research should investigate the role of time in regards to the development and retention of participant outcomes.

Long-term Effects

Aside from identifying the skill retention rate among past participants of CORE, this study hopes to identify the effects the program has on participants, specifically with regards to their personal and professional development. Contacting participants years after completing the program provides a more realistic interpretation and measurement of their skills and the impact the program has had on their lives since. Not all studies focus specifically on the long-term effects with regards to participants, but ultimately find and discuss these effects in order to solidify their program outcomes. Specifically, personal and professional development may not always be intended outcomes, but are found as a result of a study and help support and develop the program and its participants.

When discussing long-term effects, it is necessary to look at literature regarding long-term memory research. Knapp and Benton (2006) interviewed participants of an environmental education residential program in order to analyze long-term recollections. Through phone interviews conducted with participants a year after their program experience, the authors identified three major themes: student actions, program content, and emotional reactions. The results of this study point to a connection with episodic and semantic memory. The participants' recollections indicate that their memories were not simply based on recall, but on information they processed and ultimately became known from their experience.

Asfeldt and Hvenegaard (2014) investigated long-term effects of a wilderness program by examining the perceived learning outcomes of a Canadian wilderness expedition. Specifically, the participants spoke about the impact the experience had on classroom learning, developing job skills, and the overall shaping of who they are today. Personal life impacts of the program included positive life experience, nature and place appreciation, confidence, and developed skills (e.g. communication and learning). Impacts on the participants' professional lives included job skills (e.g. fieldwork skills, networking), confidence, career path (e.g. learning what they want/who they are), and self-development. This study suggests that the impact of an outdoor program can extend into other aspects of a participant's life. It argues that group and skill development is not always the ultimate impact of a program and supports the unique venue that an outdoor program provides.

It is important to recognize the relationship the long-term effects the program has on its participants with regards to the impacts these effects have on the success of the program. For instance, Gass et al. (2003) found that the effect the wilderness orientation program had on the students in turn impacted the program itself, and ultimately the university. As discussed above, the participants of this program experienced development in regards to their educational and career path. These long-term effects relate back to the effectiveness of the program staff and can facilitate change within the program. Specific to this program, as with CORE, the participants were retained as students of the university, they became ambassadors for the program, and helped uncover the role and responsibility the institution has to its students. Investigating a college-specific program uncovers a lot of other benefits and long term effects that may not occur with independent programs such as OB or NOLS. While long-term effects on the

participants may be the focus of this study, it may ultimately reveal the impacts these long-term effects have on the CORE program and Indiana University.

Summary

This literature review demonstrates the strong connection between outdoor adventure programs, longitudinal studies, and the long-term effects on participants. Pre-existing literature has shown that outdoor adventure programs benefit and discover a lot through longitudinal studies with regards to its participants. Based on previous research findings, the outdoor adventure field should invest more in investigating the long-term effects a program has on its participants, specifically in regards to personal and professional development.

This literature review has provided a framework for which the study takes place. Through the lens of a longitudinal study, CORE can be examined in different contexts, providing new understandings as to how the program influences the personal and professional development of participants years later. Examining previous research regarding similar outdoor adventure programs has provided a framework from which to work from and inspiration to achieve greater results for the CORE program.

Chapter 3

Methods

The focus of this study was to evaluate the technical and interpersonal skill retention of past participants of the CORE program at Indiana University. To describe the methods used in this study, the following sections have been included in this chapter:

1. Selection of instruments;
2. Selection of subjects;
3. Administration of survey instruments; and
4. Treatment of data.

In order to provide an in-depth understanding of the outcomes and impacts the CORE program has on past participants, this study utilized a retrospective design through both qualitative and quantitative data. Data collection took place during the spring and summer of 2015. As a recent participant of the CORE program, the researcher was familiar with the program, its culture, and staff.

Study Setup

Due to the fact that the quantitative survey instrument used in this study was designed specifically for this study and its participants, it was essential that it was reviewed and bench-tested before it being implemented. The author employed a group of Indiana University graduate students to review the instrument and provide feedback regarding wording, length, layout, understanding, etc. that need to be improved or changed before distribution to the study participants. Minor wording and layout changes were made as a result of the feedback from the graduate students. The author also conducted a pilot study of the survey by asking four past

CORE participants to complete the survey and give their feedback regarding burden of time, wording, layout, etc. Again, minor wording and layout changes were made as a result.

Selection of the Instruments

Quantitative Instrument

An instrument was created to evaluate the technical and interpersonal skill retention of past participants of the CORE program. This instrument was developed through an exploration of the literature that exists on similar outdoor adventure programs and higher education wilderness programs, as well as anecdotal experience from the researcher's participation in the program. The instrument was a retrospective pre-post questionnaire that asked participants to reflect and rate their skill level on a 5-point Likert scale on three time points: before participating in CORE, after their completion of the CORE program and their current level of skills.

The instrument used in this study consisted of three main sections: (1) technical and interpersonal skills; (2) professional and personal development; (3); demographics. Each section is operationalized below. The technical and interpersonal skills section asked the participant to rank a set of skills three times, once for what their skill level was before participating in CORE, once for immediately after CORE and once for what they believe their skill level is currently. The personal and professional development section asked the participants to rank a set of skills in terms of the impact participating in the CORE program had on their development. All questions from section (1) were scored on a 5-point Likert scale anchored by 1 (not competent) to 5 (highly competent). All questions from section (2) were scored on a 5-point Likert scale anchored by 1 (not important) to 5 (very important).

Although this instrument was not directly modeled off of a commonly used scale, it did draw inspiration from several studies (Asfeldt & Hvengaard, 2013; Ewert, Sibthorp, Sharpe,

Meier, McAvoy, Gilbertson, Roberts, & Galloway, 2000; Monz, 2002; Sibthorp, Furman, Paisley, & Gookin, 2009; Sibthorp, Paisley, & Gookin, 2007, Voight, 2004). The purpose of these studies was similar to this study and focused on similar components, such as long-term impacts and skills. Ewert et al. (2000) and Voight (2004) were particularly beneficial because their area of focus was the CORE program. Both studies distributed a scale questionnaire to CORE participants in order to better understand the benefits and components of the CORE program. Sibthorp et al. (2009) also distributed a scale questionnaire, but to NOLS alumni to determine the importance of participation in a NOLS course.

Each of these studies contributed to the specifically created instrument used in this study. The methods and instrumentation in these studies were also unique to their studies and focused on a similar, if not the same, outdoor adventure program. Using these instruments as a foundation for the instrument used in this study helped create an instrument that measures the skill retention of past participants and the impact the CORE program has on personal and professional development.

Measures

Technical skills were defined in this study as "competencies in the actual adventure activities or outdoor pursuits being led" (Priest, 1999). Specific skills such as knots, orienteering and navigation, backcountry camping, and climbing and rope management were discussed in the instrument. A sample question was, "The ability to navigate and orienteer (e.g. pace count, shoot a bearing, orient a map, etc.)". Participants then selected from the scale of whether they were not competent (1) to highly competent (5).

Interpersonal skills were defined in this study as "the human relations competencies needed to guide personal growth and achieve group unity" (Knapp, 1999). Specific skills such

as facilitation, conflict resolution, group management, and decision-making and problem solving were discussed in the instrument. A sample question was, “The ability to think on your feet”. Participants then selected from the scale of whether they were not competent (1) to highly competent (5).

Personal development was defined in this study as the impact on and/or development of the beliefs, attitudes, and knowledge of a participant (Kuh, 1995). Components such as confidence, self-awareness, developed skills (communication, independence, etc.), and relationships were discussed in the instrument. A sample question was, “The ability to effectively communicate”. Participants then selected from the scale the importance of participation in the CORE program had on the component, from (1) not important (5) highly important.

Professional development was defined in this study as the impact on and/or development of the knowledge, abilities, and skills of a participant. Components such as planning and organization, networking, and working with others were discussed in the instrument. A sample question was “The ability to work with other people to accomplish a goal”. Participants then selected from the scale the importance of participation in the CORE program had on the component, from (1) not important (5) highly important.

A reliability test was performed for the quantitative instrument and the Cronbach alpha coefficient was .838, which is above the recommended .7 value (Pallant, 2005, p. 90).

Table 1

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.838	.851	48

Qualitative Instrument

Further variables were explored through qualitative interviews. Phone interviews provided further insight into variables from the quantitative instrument, such as the retention of technical and interpersonal skills. The interview subjects volunteered their participation at the end of the quantitative instrument and were selected at random. Participants were contacted and interviewed anywhere from three to five months after they completed the quantitative instrument. A pre-established interview guide was used during the phone interviews and was created based on literature reviewed about the subject in addition to the researcher's anecdotal knowledge of different themes that often immerge during the CORE program. The interview consisted of five questions:

1. What year were you in CORE?
2. Think back on your CORE experience, what are some things that come to mind?
3. What did you learn from CORE?
4. How have you used those learnings?
5. What are some things you did not learn in CORE that would have been useful?

Interview responses were coded and concepts were identified (Strauss & Corbin, 1998). Concepts were then grouped and three major categories were created based on their similarities. The findings are reported in the results section.

Selection of the Subjects

The subjects were self-enrolled past participants of the CORE program from 1995-2014. Not all of the past participants of the CORE program could be contacted for the study, but all

participants were eligible to participate. Past CORE participants were contacted and recruited three ways: letter in the mail, email, and Facebook. Participants' home addresses were obtained from health forms or applications from their time as a CORE participant and email addresses are kept in a database, but not all addresses and emails were current, which posed a problem for being able to contact every participant. There is a CORE Alumni Facebook group that was also used as a method of contacting past participants that may not have been able to be reached using the methods mentioned above. Consent to participate in the research project from the subjects was obtained by the participants agreeing to the informed consent section on the online survey. Approval from the Indiana University Institutional Review Board was obtained before the study took place. Subjects who did not consent to participation were eliminated from the study.

Administration of the Survey Instrument

Survey data collection used a retrospective pre-post test administered to participants through an online survey. Participants completed the survey in one visit. A retrospective test format was utilized as the survey style for this study. Retrospective studies have been established to effectively measure changes over time. Kellert (1998) notes "advantages of retrospective study are typically a greater ability to examine over longer periods of time, among a comparatively large sample, and include many kind and ages of people". Additionally, retrospective pre-post formatted instruments allow participants to reflect on their skills after their completion of the CORE program and how they have changed over time.

Treatment of Data

A multivariate analysis of variance (MANOVA) was generated for the initial statistical analysis to explore significant differences in the dependent variables of technical skill retention,

interpersonal skill retention, personal and professional development. The independent variables in this study were participation in the CORE program, gender, class standing, and major.

Summary

Results from this study can be used to understand the impacts an outdoor adventure program can have on its participants. Specifically, the results from this study will greatly impact the CORE program by providing more in-depth insight into participant development. By looking at skill retention and development over three time points, the CORE program will be able to evaluate the impact it has on its participants. These methods provide better insight into the skill retention among past participants of CORE, long-term program participation impacts, and contribute to the overall field of research for outdoor adventure programs.

Chapter 4

Results

This chapter outlines the findings from the procedures described in Chapter 3. The research question of this study was to analyze the retention of technical and interpersonal skills and attitudes of past CORE participants and identify the impact these skills have on areas such as personal and professional development. The study was broken down into four dependent variables, technical skills, interpersonal skills, personal development, and professional development, and analyzed these specific areas of impact among the research subjects.

The following chapter is divided into sections based on the type of data being analyzed as well as the origin of that data. The quantitative data from the online survey instrument is presented first. These data were collected during the summer of 2015 from past CORE program participants whose participation in the program occurred between the years 2000-2014. The second section describes a qualitative analysis gathered from phone interviews from volunteers after they had taken the online survey, which took place anywhere from three to five months after completion of the survey.

Although over 200 emailed surveys were sent out and all past CORE program participants were eligible to participate, due to outdated personal information (email and home addresses), only a sample size of 60 was obtained for this study. The study broke down equally into 30 male and 30 female participants. As stated above, CORE participation years varied from 2000-2014 and class standing at the time of participation in CORE ranged from freshman to first year Master's students. Originally, 63 survey responses were obtained, but 3 were discarded due to multiple incomplete sections.

Quantitative Analysis

The quantitative instrument was analyzed using multivariate analysis of variance (MANOVA) to measure differences in participants over three time periods. MANOVA was used to measure change in each variable within subjects: technical skills, interpersonal skills, personal development, and professional development. The interpersonal and technical skill sections of the quantitative instrument were set up the same. Both sections consisted of the same six statements, but for three time periods (before CORE, after CORE, and current). The statements for the technical skills section were as follows:

- The ability to tie different knots (e.g. bowline, double fishermans)
- The ability to navigate and orienteer (e.g. pace count, shoot a bearing, orient a map, etc.)
- The ability to identify and practice low impact camping techniques (e.g. LNT)
- The ability to properly use and manage personal gear (e.g. a stove, pack, etc.)
- The ability to set up and manage a rope site
- The ability to build a fire

The statements for the interpersonal skills section were as follows:

- The ability to manage a group (facilitate a discussion, make a decision for a group, hold others accountable, etc.)
- The ability to think on your feet
- The ability to manage your own emotions
- The ability to read other people's emotions
- The ability to be assertive

- The ability to resolve conflict

The personal and professional development sections had 6 questions each. The four variables were analyzed using the independent variables of gender, class standing, and major.

Box's Test of Equality of Covariance Matrices was calculated for each variable pairing to determine the assumption of homogeneity. This was important because Box's Test determines which multivariate test (Wilks' Lambda, Pillai's Trace, etc.) to use to test significance. Fortunately for each of the variable pairings, Box's Test revealed that it had not violated the assumption (sig > .001) and Wilks' Lambda could be used to test significance (Pallant, 2005, p. 258).

The value and significance level of Wilks' Lambda was used in determining the significance of each variable pairing. Wilks' Lambda was chosen because it is the most commonly reported for MANOVA and the independent variables had more than two groups (Mayers, 2013, p. 321). If a variable was found to be significant, an effect size was calculated by looking at Partial Eta Squared. According to Cohen (1988), as seen in Pallant's SPSS Survival Manual, the general rule is that .01 = small effect size, .06 = moderate effect size, and .14 = large effect size (Pallant, 2005, p. 201).

Gender

The independent variable of gender was compared with the dependent variables of interpersonal skills, technical skills, personal development, and professional development. There was an even split of 30 females and 30 males included in each MANOVA test.

Gender and technical skills (Table 2) was the only combination that produced a statistically significant output. There was significant difference between men and women with regards to technical skill retention: F = 1.97, p = .036, Wilks' Lambda= .54, partial eta

squared=.464. The value of partial eta squared (.464) shows that gender had a large effect on the retention of skills. According to the descriptive statistics (Appendix B), the mean scores of male participants were higher than females for the majority of the technical skills statements. The only skills males averaged lower on were: personal gear (after CORE), LNT (current), and personal gear (current). However, when the results for the dependent variables were considered separately, there was not a specific skill that reached statistical significance.

Table 2

Statistical Findings for Levels of Gender and Technical Skills

Effect	Value	*F*	Hypothesis *df*	Error *df*	Sig	Partial Eta Squared
Intercept Pillai's Trace	.998	1411.913[b]	18.000	41.000	.000	.998
Wilks' Lambda	.002	1411.913[b]	18.000	41.000	.000	.998
Gender Pillai's Trace	.464	1.971[b]	18.000	41.000	.036	.464
Wilks' Lambda	.536	1.971[b]	18.000	41.000	.036	.464

There were no significant multivariate effects for gender and interpersonal skills (Table 3), personal development (Table 4), or professional development (Table 5).

Table 3

Statistical Findings for Levels of Gender and Interpersonal Skills

Effect	Value	*F*	Hypothesis *df*	Error *df*	Sig	Partial Eta Squared
Intercept Pillai's Trace	.994	383.185[b]	18.000	41.000	.000	.994
Wilks' Lambda	.006	383.185[b]	18.000	41.000	.000	.994
Gender Pillai's Trace	.360	1.282[b]	18.000	41.000	.249	.360
Wilks' Lambda	.640	1.282[b]	18.000	41.000	.249	.360

Table 4

Statistical Findings for Levels of Gender and Personal Development

Effect	Value	*F*	Hypothesis *df*	Error *df*	Sig	Partial Eta Squared
Intercept Pillai's Trace	.970	282.910[b]	6.000	53.000	.000	.970
Wilks' Lambda	.030	282.910[b]	6.000	53.000	.000	.970
Gender Pillai's Trace	.167	1.768[b]	6.000	53.000	.124	.167
Wilks' Lambda	.833	1.768[b]	6.000	53.000	.124	.167

Table 5

Statistical Findings for Levels of Gender and Professional Development

Effect	Value	*F*	Hypothesis *df*	Error *df*	Sig	Partial Eta Squared
Intercept Pillai's Trace	.960	213.402[b]	6.000	53.000	.000	.960
Wilks' Lambda	.040	213.402[b]	6.000	53.000	.000	.960
Gender Pillai's Trace	.068	.648[b]	6.000	53.000	.692	.068
Wilks' Lambda	.932	.648[b]	6.000	53.000	.692	.068

Class Standing

The independent variable of class standing was compared with the dependent variables of interpersonal skills, technical skills, personal development, and professional development. The breakdown of classes included: 1 freshman, 10 sophomores, 31 juniors, 14 seniors, and 4 first year Master's students. There were no significant multivariate effects for class standing and interpersonal skills (Table 6), technical skills (Table 7), personal development (Table 8), or professional development (Table 9).

Table 6

Statistical Findings for Levels of Class Standing and Interpersonal Skills

Effect	Value	*F*	Hypothesis *df*	Error *df*	Sig	Partial Eta Squared
Intercept Pillai's Trace	.979	97.309[b]	18.000	38.000	.000	.979
Wilks' Lambda	.021	97.309[b]	18.000	38.000	.000	.979
ClassStanding Pillai's Trace	1.190	.964	72.000	164.000	.561	.297
Wilks' Lambda	.225	.973	72.000	151.782	.544	.311

Table 7

Statistical Findings for Levels of Class Standing and Technical Skills

Effect	Value	*F*	Hypothesis *df*	Error *df*	Sig	Partial Eta Squared
Intercept Pillai's Trace	.995	411.080[b]	18.000	38.000	.000	.995
Wilks' Lambda	.005	411.080[b]	18.000	38.000	.000	.995
ClassStanding Pillai's Trace	1.364	1.178	72.000	164.000	.197	.341
Wilks' Lambda	.178	1.164	72.000	151.782	.218	.351

Table 8

Statistical Findings for Levels of Class Standing and Personal Development

Effect	Value	*F*	Hypothesis *df*	Error *df*	Sig	Partial Eta Squared
Intercept Pillai's Trace	.901	76.138[b]	6.000	50.000	.000	.901
Wilks' Lambda	.099	76.138[b]	6.000	50.000	.000	.901
ClassStanding Pillai's Trace	.360	.872	24.000	212.000	.640	.090
Wilks' Lambda	.682	.849	24.000	175.639	.670	.091

Table 9

Statistical Findings for Levels of Class Standing and Professional Development

Effect	Value	*F*	Hypothesis *df*	Error *df*	Sig	Partial Eta Squared
Intercept Pillai's Trace	.881	61.477[b]	6.000	50.000	.000	.881
Wilks' Lambda	.119	61.477[b]	6.000	50.000	.000	.881
ClassStanding Pillai's Trace	.414	1.020	24.000	212.000	.442	.104
Wilks' Lambda	.632	1.030	24.000	175.639	.431	.108

Major

The independent variable of major was compared with the dependent variables of interpersonal skills, technical skills, personal development, and professional development. The breakdown of majors included: 4 Environmental Management, 31 Outdoor Recreation, 1 Recreational Therapy, 2 Tourism, Hospitality, and Event Management, and 22 other. If respondents chose "other", they were able to write in their specific major. Seventeen "other" majors were listed and included: Anthropology, Biology, Cognitive Science, Creative Writing, Criminal Justice, etc.

There were no significant multivariate effects for major and interpersonal skills (Table 10), technical skills (Table 11), personal development (Table 12), or professional development (Table 13).

Table 10

Statistical Findings for Levels of Major and Interpersonal Skills

Effect	Value	*F*	Hypothesis *df*	Error *df*	Sig	Partial Eta Squared
Intercept Pillai's Trace	.978	94.956[b]	18.000	38.000	.000	.978
Wilks' Lambda	.022	94.956[b]	18.000	38.000	.000	.978
Major Pillai's Trace	1.341	1.148	72.000	164.000	.235	.335
Wilks' Lambda	.187	1.119	72.000	151.782	.280	.342

Table 11

Statistical Findings for Levels of Major and Technical Skills

Effect	Value	*F*	Hypothesis *df*	Error *df*	Sig	Partial Eta Squared
Intercept Pillai's Trace	.993	320.114[b]	18.000	38.000	.000	.993
Wilks' Lambda	.007	320.114[b]	18.000	38.000	.000	.993
Major Pillai's Trace	.869	.632	72.000	164.000	.986	.217
Wilks' Lambda	.357	.631	72.000	151.782	.985	.227

Table 12

Statistical findings for levels of Major and Personal development

Effect	Value	*F*	Hypothesis *df*	Error *df*	Sig	Partial Eta Squared
Intercept Pillai's Trace	.889	66.617[b]	6.000	50.000	.000	.889
Wilks' Lambda	.111	66.617[b]	6.000	50.000	.000	.889
Major Pillai's Trace	.239	.562	24.000	212.000	.952	.060
Wilks' Lambda	.777	.549	24.000	175.639	.957	.061

Table 13

Statistical Findings for Levels of Major and Professional Development

Effect	Value	*F*	Hypothesis *df*	Error *df*	Sig	Partial Eta Squared
Intercept Pillai's Trace	.858	50.245[b]	6.000	50.000	.000	.858
Wilks' Lambda	.142	50.245[b]	6.000	50.000	.000	.858
Major Pillai's Trace	.485	1.218	24.000	212.000	.229	.121
Wilks' Lambda	.577	1.251	24.000	175.639	.205	.129

Time and Skills

Further analysis was performed to determine whether or not there was a correlation between time out of the CORE program and technical and interpersonal skill retention. Time out of CORE was based on the year they participated in the CORE program and was broken down into three time periods: 1= 0-4 years out of CORE, 2= 5-9 years out of CORE, and 3= 10+ years out of CORE. Technical and interpersonal skill retention was group together by time periods used on the survey: before CORE, immediately after, and current skill level.

The relationship between technical skill retention and time out of CORE (Table 14) was investigated using Spearman's rank correlation (rho). There was a small, positive correlation between time out of CORE and before CORE technical skill retention [r=.177], with the longer time spent out of CORE associated with high levels of before CORE technical skill retention.

Table 14

Correlations for Time Out of CORE & Technical Skill Retention

			Before CORE - Tech	Immediately After Completion of CORE - Tech	Current Skill Level - Tech	Time out of CORE
Spearman's rho	Before CORE - Tech	Correlation Coefficient	1.000	.244**	.493**	.177
		Sig. (2-tailed)	.	.000	.000	.175
		N	360	360	360	60
	Immediately After Completion of CORE - Tech	Correlation Coefficient	.244**	1.000	.475**	-.031
		Sig. (2-tailed)	.000	.	.000	.816
		N	360	360	360	60
	Current Skill Level - Tech	Correlation Coefficient	.493**	.475**	1.000	.048
		Sig. (2-tailed)	.000	.000	.	.715
		N	360	360	360	60
	Time out of CORE	Correlation Coefficient	.177	-.031	.048	1.000
		Sig. (2-tailed)	.175	.816	.715	.
		N	60	60	60	60

The relationship between interpersonal skill retention and time out of CORE (Table 15) was investigated using Spearman's rank correlation (rho). There was a small, positive correlation between time out of CORE and current skill retention [r=.206], with the longer time spent out of CORE associated with high levels of current interpersonal skill retention. There was also a small negative correlation between time out of CORE and before CORE interpersonal skill retention [-.138], with the longer time spent out of CORE associated with lower levels of before CORE interpersonal skill retention.

Table 15

Correlations for Time Out of CORE & Interpersonal Skill Retention

			Time out of CORE	Before CORE - Interpersonal	Immediately After Completion of CORE - Interpersonal	Current Skill Level - Interpersonal
Spearman's rho	Time out of CORE	Correlation Coefficient	1.000	-.138	.019	.206
		Sig. (2-tailed)	.	.295	.883	.113
		N	60	60	60	60
	Before CORE - Interpersonal	Correlation Coefficient	-.138	1.000	.539**	.342**
		Sig. (2-tailed)	.295	.	.000	.000
		N	60	360	360	360
	Immediately After Completion of CORE - Interpersonal	Correlation Coefficient	.019	.539**	1.000	.532**
		Sig. (2-tailed)	.883	.000	.	.000
		N	60	360	360	360
	Current Skill Level - Interpersonal	Correlation Coefficient	.206	.342**	.532**	1.000
		Sig. (2-tailed)	.113	.000	.000	.
		N	60	360	360	360

Jobs and Skills

Further analysis was performed to determine whether or not there was a correlation between the type of job a participant held after CORE and technical and interpersonal skill retention. Participants in the survey listed the jobs they have held since leaving the CORE program, which were then categorized as within the outdoor industry or not (1= within outdoor industry, 2=not within outdoor industry). Technical and interpersonal skill retention was group together by time periods used on the survey: before CORE, immediately after, and current skill level.

The relationship between technical skill retention and jobs held after CORE (Table 16) was investigated using Spearman's rank correlation (rho). There was a small, positive correlation between jobs held by past participants and immediately after CORE technical skill

retention [r= .118], with those who have held jobs outside of the outdoor industry associated with high levels of before CORE technical skill retention.

Table 16

Correlations for Jobs Held by Past Participants and Technical Skill Retention

			Before CORE - Tech	Immediately After Completion of CORE - Tech	Current Skill Level - Tech	Jobs
Spearman's rho	Before CORE - Tech	Correlation Coefficient	1.000	.244**	.493**	-.100
		Sig. (2-tailed)	.	.000	.000	.058
		N	360	360	360	360
	Immediately After Completion of CORE - Tech	Correlation Coefficient	.244**	1.000	.475**	.118*
		Sig. (2-tailed)	.000	.	.000	.026
		N	360	360	360	360
	Current Skill Level - Tech	Correlation Coefficient	.493**	.475**	1.000	-.069
		Sig. (2-tailed)	.000	.000	.	.191
		N	360	360	360	360
	Jobs	Correlation Coefficient	-.100	.118*	-.069	1.000
		Sig. (2-tailed)	.058	.026	.191	.
		N	360	360	360	360

The relationship between interpersonal skill retention and jobs held after CORE (Table 17) was investigated using Spearman's rank correlation (rho). There were no significant correlations between jobs past participants held after CORE and interpersonal skills.

Table 17

Correlations for Jobs Held by Past Participants and Interpersonal Skill Retention

			Jobs	Before CORE - Interpersonal	Immediately After Completion of CORE - Interpersonal	Current Skill Level - Interpersonal
Spearman's rho	Jobs	Correlation Coefficient	1.000	.013	.070	.083
		Sig. (2-tailed)	.	.799	.186	.116
		N	360	360	360	360
	Before CORE - Interpersonal	Correlation Coefficient	.013	1.000	.539**	.342**
		Sig. (2-tailed)	.799	.	.000	.000
		N	360	360	360	360
	Immediately After Completion of CORE - Interpersonal	Correlation Coefficient	.070	.539**	1.000	.532**
		Sig. (2-tailed)	.186	.000	.	.000
		N	360	360	360	360
	Current Skill Level - Interpersonal	Correlation Coefficient	.083	.342**	.532**	1.000
		Sig. (2-tailed)	.116	.000	.000	.
		N	360	360	360	360

Quantitative Summary

The quantitative information gathered from the online survey only produced one statistically significant result. There was a statistical significance among gender and technical skill retention. Unfortunately, these results did not support the hypotheses proposed by the author. Although not all of the variables produced significant results, the quantitative data gathered can still provide insight into the CORE program. These results will be useful in applying the findings of this research project and consideration for further studies.

Qualitative Interview Analysis

Thematic analysis was used in the interpretation of the qualitative data. Open coding provided the framework for analyzing the results of the qualitative interviews (Strauss & Corbin, 1998). The researcher conducted the phone interviews and then transcribed the interviews.

Major themes, reoccurring ideas, and topics were identified and similarities were grouped together. An over-arching category was created for the grouped together ideas, themes, and topics.

A total of 10 volunteers participated in the phone interviews. From the interviews, six concepts consistently emerged. These concepts were defined by the author by using terms gathered from the interviews (Table 18) and were then grouped into 3 categories based on their common link. The six concepts were:

- technical skills – also referred to as hard skills or outdoor skills; all-encompassing term for skills: ropes, knots, backpacking, and climbing,
- interpersonal skills – also referred to as soft skills; comprehensive term for skills: leadership, conflict resolution, and self-awareness,
- confidence – belief in one's abilities
- job – also referred to as work; paid position within the outdoor recreation industry, as well as other industries
- challenge – pushing oneself to try something new or accomplish a task; mental and physical toughness
- experience – overarching term for the events and memories that occurred during the program; recall of feelings and events

Table 18

Constants Matrix for Qualitative Instrument

Program Components	Vocational Training	Self-Discovery
Skills (35)	Work (32)	Myself (12)
Outdoor (28)	Job (17)	Challenge/Challenging (6)
Experience (17)	Outdoor/Recreation field (9)	Leader/Leadership (6)
Rock climbing (6)		Confidence/Confident (4)
Classroom (4)		
Expedition (3)		

Major Categories

These six concepts were divided into groups based on their relationship to one another. Concepts with commonalities such as technical and interpersonal skills were then placed under the larger category of "program components". These categories are presented independently in the following section. However, it should be noted that there were certain concepts that could not be identified with only one category and were included in two. For example, experience was included in both program components and vocational training.

Program Components

Much investigation into the specific program components was the basis of this study, so it was not surprising that the program components were a major category discussed in the phone interviews. Although the quantitative data may not have found some program components (such as interpersonal skills) significant, the qualitative data yielded different results. Program components similar to those analyzed in the quantitative data were referred to at length in the phone interviews.

All 10 interviewees referenced program components such as technical and interpersonal skills, the experience, and confidence. Technical and interpersonal skills were the most notable program components and mentioned in all five questions. However, the mention of skills was

only prominent in one question: “what did you learn”. Interpersonal skills, such as group management, conflict resolution, and communication were mentioned by most of the interviewees. The quantitative analysis, however, showed that interpersonal skills were not significantly retained. Further investigation should occur as to whether or not the framing of quantitative instrument questions contributed to this difference.

Group dynamics, or group management, was the most significant course component according to the qualitative interviews. Participants attributed this to the fact that you were with the same group of people for an entire semester and could not avoid working with a group. Subjects learned a lot about themselves by working in a group.

Vocational Training

The qualitative interviews revealed that their experience in the CORE program contributed to their vocational training more than they thought while participating in the program. Concepts related to vocational training were referenced most often in the “how did you use those learnings” and “what are some things that you did not learn in CORE that would have been useful” questions. Although not every interviewee, or CORE participant for that matter, got a job in the outdoor recreation field, the skills and experience gained through CORE still play a role in their current job. Again, professional development was not found to have significant retention in the quantitative analysis, but is mentioned quite a bit in the qualitative analysis.

Technical and interpersonal skills were mentioned with regards to jobs they have previously held or their current position. Those in the outdoor industry referenced technical skills more, but almost every interviewee mentioned using technical skills either at work or in their personal adventures. Moreover, all interviewees mentioned interpersonal skills and the experiences gained from CORE.

The most interesting aspect with regards to vocational training was the magnitude to which it was referred to when asked, "what are some things that you did not learn in CORE that would have been useful". Not every respondent mentioned vocational training, but it seemed to be topic that the participants wished was covered more in depth. As one respondent put it: "So, I think spending more time on marketing yourself, because you've gained all of these skills, now how do you present them to an employer?" (Interview Transcriptions, Subject 9, lines 251-253)

Self-Discovery

The findings suggest that self-discovery was a major outcome of participation in the CORE program for the interview subjects. Although obtaining and developing skills was the focus of the quantitative instrument, the qualitative instrument brought to light the more personal side of participants' experiences. The respondents attributed concepts such as confidence and challenge most to self-discovery.

Although individual activities and times of reflection were provided during the CORE program, none of the respondents specifically attributed their self-discovery to these program components. Interviewees regarded the CORE program as a whole having a major impact on their sense of confidence and ability to push themselves. One respondent summarized the experience: "It's definitely a way to be more self-assured, push your boundaries and see that you are capable of much more than you thought you were." (Interview Transcriptions, Subject 5, lines 124-126)

The subjects also expressed that succeeding in the CORE program gave them the confidence to step out of their comfort zone and challenge themselves in a new endeavor. Whether it was moving across country, being able to camp and hike on their own, or applying for a job in the outdoor industry, they attribute it to the confidence they gained. One subject

remarked, “Having gone through CORE, I’ll be honest, it was really challenging…that kind of experience helps in many intangible ways, every year since CORE, so it is really hard to say what aspect of my life hasn’t been affected by it, you know?” (Interview Transcriptions, Subject 5, lines 135-140) This response shines some light onto why the quantitative analysis may have turned out so many statistically insignificant results.

Qualitative Summary

The qualitative information gathered from the interviews revealed several concepts and information to supplement the research project. The interviews confirmed the topics examined through the quantitative instrument. The interviews also provided some additional insight into broad topics such as personal and professional development and how they are developed through the CORE program. Three categories were established to identify and summarize major areas of emphasis among the interview respondents. These categories will be useful in applying the findings of this research project and consideration for further studies.

Results Summary

Although a low sample size was obtained (sixty subjects), a large quantity of data was still able to be collected between the two research methods. Sixty past CORE participants filled out the online quantitative instrument and MANOVA was performed on the data. The results indicated that technical skills are retained when looked at through the lens of gender, with males having a higher retention rate than females. Major and class standing did not produce any significant outcomes.

Spearman’s rank correlation was used to determine whether or not there was correlation between time out of CORE and technical and skill retention, as well as jobs held by past participants after CORE and technical and interpersonal skill retention. A small, positive

correlation between time out of CORE and before CORE technical skill retention [r=.177] and time out of CORE and current skill retention [r=.206]. A small, positive correlation was also found between jobs held by past participants and immediately after CORE technical skill retention [r= .118].

Ten voluntary phone interviews were conducted after the participants completed the online survey. The interview transcripts were coded and concepts and major themes were identified. The three major themes that emerged were program components, vocational training, and self-discovery. These themes provided additional insight as to the outcomes of the CORE program that the quantitative data did not provide.

Chapter 5

Summary, Findings, Conclusions, Implementations, Limitations, Recommendations, Reflection and Conclusion

Summary

This study investigated the retention of technical and interpersonal skills, attitudes of past CORE program participants, and the impact these skills had on areas such as personal and professional development. The subjects in this study (N = 60) were former CORE program participants that completed one quantitative questionnaire. In addition to the quantitative questionnaire, qualitative interviews from 10 volunteers were used to gather further data about the retention of skills and the impact of the CORE program.

The information gained in this study can be used to further examine the retention of technical and interpersonal skills in CORE participants. In addition to this, it can also be used to understand the impacts and outcomes of an outdoor education program, specifically as they relate to personal and professional development.

Findings

This study was undertaken to better understand the outcomes of the CORE program among past participants. By examining the four variables of technical skills, interpersonal skills, personal development, and professional development, the researcher hopes to gather information about the overall effects of participation in the CORE program.

Quantitative Findings

The analysis of the quantitative data only yielded one statistically significant variable pair. The researcher hoped for a larger sample size, which would help obtain additional quantitative results. The statistical test MANOVA resulted in low statistical power, which made

drawing conclusions difficult to ascertain based on quantitative data alone. The data were generated using SPSS 23 and MANOVA to examine outcomes over time. The research questions were tested at the .05 level and yielded that following results:

Gender

Gender scores revealed that technical skills were statistically significant among male and female participants (F = 1.97, *p* =.036, Wilks' Lambda = .54, partial eta squared = .464), with males reporting higher scores on all but four of the skill statements (see Appendix C). Interpersonal skills (F = 1.43, *p* = .172, Wilks' Lambda = .65), personal development (F = 1.77, *p* = .124, Wilks' Lambda = .83) and professional development (F = .65, *p* = .692, Wilks' Lambda = .93), however, did not report significant results. Mean scores for technical and interpersonal skills and personal and professional development statements are seen in the descriptive statistics table below. Females are represented by (1) and (2) are males.

Class Standing

Class standing did not produce any significant results for interpersonal skills (F = .97, *p* = .544, Wilks' Lambda = .22), technical skills (F = 1.16, *p* = .218, Wilks' Lambda = .18), personal development (F = .85, *p* = .670, Wilks' Lambda = .68), or professional development (F = 1.03, *p* = .431, Wilks' Lambda = .63). Mean scores for technical and interpersonal skills and personal and professional development statements are seen in the descriptive statistics table below. The class standings are as follows: (1) freshman, (2) sophomore, (3) junior, (4) senior, and (5) first year Master's.

Major

Major produced the same results as class standing, no significant results for interpersonal skills (F = 1.12, *p* = .280, Wilks' Lambda = .19), technical skills (F = .631, *p* = .985, Wilks' Lambda = .36), personal development (F =. 549, *p* = .957, Wilks' Lambda = .78), or professional development (F = 1.25, *p* = .205, Wilks' Lambda = .58). Mean scores for technical and interpersonal skills and personal and professional development statements are seen in the descriptive statistics table below. The majors are as follows: (1) environmental management, (4) outdoor recreation, (9) recreational therapy, (10) tourism, hospitality, and event management, and (11) other.

Although the statistically significant finding of gender and technical skill retention differs from most other studies the author has examined, it is still not a strong enough finding. The author wanted to find a stronger connection between any of the independent variables and dependent variables, specifically in regards to technical skills. However, the lack of statistically significant results with hard skills echoes the findings of other studies (Gass, Garvey, & Sugerman, 2003; Goldenberg et al., 2005). These studies did not find any connection between participants and skills, but rather, personal experiences were more commonly reported outcomes of outdoor programs.

Qualitative Findings

In the analysis of the qualitative data three major themes emerged: program components, vocational training, and self-discovery. Program components are the specific aspects of the CORE program that contribute to learning, such as expedition, classroom lessons, and skills taught. Vocational training refers to the skills and experience gained that contributes to

acquiring and performing a job. Self-discovery focuses on the personal development of the participant, specifically, what they learned about themselves as a result of their participation in the program. These themes further support the four variables used in this study, which included technical and interpersonal skills and personal and professional development, and provide better insight as to how participants value these variables. The themes were generated from the volunteer phone interviews three to five months after they completed the quantitative interview and anywhere from one to fifteen years after completion of the CORE program.

The qualitative interview results of this study matched more closely with previous studies that found that participants of outdoor programs are more impacted by their experiences and what they learned about themselves than the specific skills they were taught (Asfeldt and Hvenegaard, 2014; Davis-Berman and Berman, 2012). As a result of the qualitative findings, the author believes it is beneficial for future studies of the CORE program to focus on the themes brought up in the interviews. The author found that providing interview participants with open-ended questions produced more in-depth responses than the structured quantitative instrument. There is hope that future studies will allow for more reflection from past participants, that way the program can truly learn and benefit from the research.

Conclusions

The following conclusions have been drawn as a result of this study:

1. Participation in the CORE program can enhance technical skill retention among male participants, specifically: knots, navigation and orienteering, LNT, rope site management, and fire building.
2. Program components (i.e., specific aspects of the CORE program), vocational training (i.e., skills and experience related to acquiring and performing a job), and self-discovery

(i.e., personal development as a result of the program) are outcomes of participation in the CORE program.

Implications

The findings of this study yield many implications for researchers and practitioners. This research can serve as a starting point for further investigation into the impacts of the CORE program on its past participants. In addition, it provides a new foundation for thinking about the types of outcomes outdoor education participants experience as well as how preexisting outcomes are achieved. Skill retention may be a major program component that has been largely overlooked. The retention of skills may provide a platform for other program components to be achieved. For example, a participant may have the confidence to lead an adventure trip as a result of the technical and interpersonal skills acquired during CORE.

This study has also provided insight into how the personal and professional development of CORE participants is initiated and strengthened through the program outcomes, similar to what Davis-Berman and Berman (2012) found in their study. While additional research should investigate more specifically how these developments occur, it should also examine any contributing factors after completion of the program.

Implications for practitioners include an increased understanding of how an outdoor education program can facilitate skill retention and development. Better understanding of how these outcomes are achieved will allow program designers and program leaders to cater to their specific programs and participants. This research also shows the benefits of these skills in participants regardless of their intended field of study. Additionally, the research also speaks to the contribution outdoor education can make on college students (Gass et al., 2003).

Discussion

The findings conclude that there is a significant retention rate of technical skills among participants of the CORE program, specifically male participants. Unfortunately, the other dependent variables did not produce significant results. However, due to a low sample size, it is recommended that the CORE program continue to gather additional data in order to confirm these results. Even though it evolved into more than a study on skill retention, this research project was originally undertaken to examine the skill retention rate among past CORE program participants. The researcher measured changes in the technical skill retention among gender across three time periods.

The study also provided insight into how skill retention and development is enhanced through the program components of the CORE program through the qualitative interview process. The results of the interviews provided more insight into the outcomes of the CORE program. Participants were better able to express what they learned, how they learned it, and what CORE meant to them. The divergence in the quantitative and qualitative findings demonstrates to the researcher that concepts such as program components and self-discovery are more important to the participants than skill retention.

Although not many significant findings were produced as a result of this study, it still has the potential to be adapted for other outdoor education programs. Practitioners now have a framework from which to work and apply to their program outcomes. This study provides a base understanding of the role skill retention and development has on participants' years after their completion of an outdoor education program.

Additionally, this study increases the likelihood that similar types of programs may emerge by demonstrating the positive impacts of an outdoor education program on personal and

professional development if its participants. The author believes there is a need for similar programs for teen and college age groups. Through this research effort, the different backgrounds and experiences of those who participated in CORE, as well as what types of overall outcomes may be experienced are better understood.

Limitations of the Study

1. The researcher was not able to contact all past CORE program participants for the study.
2. Participation in the study was voluntary, therefore generalizability of the results beyond the sample would be difficult.
3. Participants self-reported their skill retention, which meant honesty of answers was assumed.
4. Participants may not have been able to articulate what they learned from the CORE program.

Recommendations for Future Study

Based on this research, the following recommendations are made for future study:

1. The quantitative instrument should continue to be used and developed by the CORE program
2. Future studies should investigate the impact participation had on CORE participants' decision to change majors or enter the outdoor recreation job industry;
3. Future studies should investigate the effects of prior exposure and knowledge of the CORE program on participant outcomes and development;
4. Future studies should investigate the lasting effects from CORE program participation; and

5. Future studies should examine the level of skill retention and development relevant to intended program outcomes.

Personal Reflections

The researcher was a CORE program participant in the spring of 2014 and was inspired by her experience to conduct this study. The findings of this study surprised the researcher, who assumed that skill retention, specifically technical skills, would have a greater statistical significance. This belief stemmed from the researcher's experience in the program, which included the memorization of several different knots and a plethora of orienteering skills. As a result of the researcher's experience in the CORE program, she believes that the data turned out differently because time out of the program results in the reflection and practice of interpersonal skills on a daily basis rather than technical skills. The researcher is employed within the outdoor industry, but would still rank interpersonal skill retention higher than technical skills because of the frequency with which interpersonal skills are used day-to-day.

Conclusion

This study supports other findings that outdoor adventure programs have the potential to have a lasting impact on its participants (Sibthorp et al., 2007; Davis-Berman & Berman, 2012; Gass et al., 2003; Asfeldt & Hvenegaard, 2014). This study found that technical skill retention on past participants of the CORE program was significant, specifically among male participants. Technical skills such as knots, navigation and orienteering, LNT, rope site management, and fire building were found significant among male CORE participants. In addition, this study also found that program components (i.e., specific aspects of the CORE program), vocational training (i.e., skills and experience related to acquiring and performing a job), and self-discovery (i.e.,

personal development as a result of the program) were outcomes of participation in the CORE program.

The author acknowledges that a small sample size contributed to a lack of significant results. It is recommended that the quantitative instrument be further developed in order to elicit better responses. Ideally, future research will be able to gather a larger sample size and examine aspects of participants, such as prior knowledge of the CORE program and prior involvement in outdoor activities. In the future, the author hopes that more research can be conducted on the CORE program in order to further investigate the impacts the program has on its participants.

References

Asfeldt, M. and Hvenegaad, G. (2014). Perceived learning, critical elements and lasting impacts on university-based wilderness educational expeditions. *Journal of Adventure Education and Outdoor Learning, 14*(2), 132-152.

Ashbaugh, J.L. (2003). The hard case for soft skills and retention. *Healthcare Executive, 18*(2), 59-60.

Ballard, A. (2006). Collective meanings of an outdoor leadership program experience. *CORE Research: A compilation of research based on the Conservation and Outdoor Recreation Education Program at Indiana University, 1*, 76-84.

Ballard, A., Shellman, A., and Hayashi, A. (2006). Collective meanings of an outdoor leadership program experience as lived by participants. *CORE Research: A compilation of research based on the Conservation and Outdoor Recreation Education Program at Indiana University, 1*, 55-75.

Caudron, S. (1999). The hard case for soft skills. *Workforce, 78*(7), 60-65.

Davidson, C. (2012). *The development of social support through adventure education between fathers and sons*. (Unpublished Master's thesis). Indiana University, Bloomington, Indiana.

Davis-Berman, J. and Berman, D. (2012). Reflections of a trip: Two decades later. *Journal of Experiential Education, 35*(2), 326-340.

Ewert, A. (2004). The effect of outdoor experiential programs upon environmental beliefs: Do they make a difference? *CORE Research: A compilation of research based on the Conservation and Outdoor Recreation Education Program at Indiana University, 1*, 27-33.

Ewert, A., and Yoshino, A. (2007). A preliminary exploration of the influence of short-term adventure-based expeditions on levels of resilience. *Journal of Experiential Education, 30*(3), 262-266.

Ewert, A., Voight, A., Calvin, D., and Hayashi, A. (2007). Outdoor programs and environmental beliefs: Investigating the stability of outcomes and levels of salience. *CORE Research: A compilation of research based on the Conservation and Outdoor Recreation Education Program at Indiana University, 1*, 93-98.

Ewert, A., Sibthorp, J., Sharpe, E., Meier, J., McAvoy, L., Gilbertson, K., Roberts, N., & Galloway, S. (2000). Components of the outdoor trip: What really happens? *CORE Research: A compilation of research based on the Conservation and Outdoor Recreation Education Program at Indiana University, 1*, 1-23.

Gass, M.A., Garvey, D.E., and Sugerman, D.A. (2003). The long-term effects of a first-year student wilderness orientation program. *Journal of Experiential Education, 26*(1), 34-40.

Goldenberg, M. and Soule, K.E. (2014). A four-year follow-up means-end outcomes from outdoor adventure programs. *Journal of Adventure Education and Outdoor Learning*, 1-12.

Goldenberg, M., Soule, K., Cummings, J., and Pronsolino, D. (2010). Longitudinal participant outcomes associated with Outward Bound and National Outdoor Leadership School: A means-end investigation. *Research in Outdoor Education, 10*, 57-73.

Goldenberg, M., McAvoy, L., and Klenosky, D.B. (2005). Outcomes from the components of an Outward Bound experience. *Journal of Experiential Education, 28*(2), 123-146.

Hattie, J., Marsh, H.W., Neill, J.T., and Richards, G.E. (1997). Adventure education and

Outward Bound: Out-of-class experiences that make a lasting difference. *Review of Educational Research, 61*(1), 43-87.

Kellert, S.R. (1998). A national study of outdoor wilderness experience. Connecticut: National Fish and Wildlife Foundation.

Knapp, C.E. (1999). Processing the adventure experience. In J.C. Miles and S. Priest (Eds.), *Adventure Programming* (pp. 219-225). State College, PA: Venture Publishing, Inc.

Kuh, G.D. (1995). The other curriculum: Out-of-class experiences associated with student learning and personal development. *The Journal of Higher Education, 66*(2), 123-155.

Mayers, A. (2013). *Introduction to Statistics and SPSS in Psychology*. Retrieved from http://www.pearsonhighered.com/assets/hip/gb/uploads/Mayers_IntroStatsSPSS_Ch14.pdf

McKenzie, M. (2003). Beyond "The Outward Bound Process:" Rethinking student learning. *Journal of Experiential Education, 26*(1), 8-23.

Meier, J. (1996). The C-O-R-E program: An experiential based college-level outdoor leadership training model. *The Bradford Papers, 6*, 82-86.

Monz, C. (2002). Evaluating student satisfaction in wilderness education courses: An example from the National Outdoor Leadership School. *International Journal of Wilderness, 8*(2), 30-33.

Pallant, J. (2005). *SPSS Survival Manual*. Retrieved from http://www.academia.dk/BiologiskAntropologi/Epidemiologi/PDF/SPSS_Survival_Manual_Ver12.pdf

Priest, S. (1999). Outdoor Leadership Competencies. In J.C. Miles and S. Priest (Eds.), *Adventure Programming* (pp. 237-239). State College, PA: Venture Publishing, Inc.

Raiola, E. (2003). Communication and problem-solving in extended field-based outdoor adventure education courses. *Journal of Experiential Education, 26*(1), 50-54.

Shellman, A. and Ewert, A. (2004). Learning styles of college students enrolled in an experience-based outdoor leadership program. *CORE Research: A compilation of research based on the Conservation and Outdoor Recreation Education Program at Indiana University, 1*, 24-26.

Shooter, W., Sibthorp, J., and Paisley, K. (2009). Outdoor leadership skills: A program perspective. *Journal of Experiential Education, 32*(1), 1-13.

Sibthorp, J., Paisley, K., and Gookin, J. (2007). Exploring participant development through adventure-based programming: A model from the National Outdoor Leadership School. *Leisure Sciences, 29*(1), 1-18.

Sibthorp, J., Furman, N., Paisley, K., & Gookin, J. (2009). Long-term impacts attributed to participation in adventure education: Preliminary findings from NOLS. *Research in Outdoor Education, 9*, 86-103.

Voight, A. (2004). An exploratory analysis of anticipated benefits and their importance in outdoor adventure recreation programs: Are outcomes equitable across gender? *CORE Research: A compilation of research based on the Conservation and Outdoor Recreation Education Program at Indiana University, 1*, 34-51.

Webb, D.J. (1999). In J.C. Miles and S. Priest (Eds.), *Adventure Programming* (pp. 3-8). State College, PA: Venture Publishing, Inc.

Appendix A
Quantitative Instrument

When answering the following questions, select one of the five options that best describes your skill level for each corresponding time frame.

	Before CORE				
	Not Competent (1)	Somewhat Competent (2)	Uncertain (3)	Competent (4)	Highly Competent (5)
The ability to tie different knots (e.g. bowline, double fisherman's)	o	o	o	o	o
The ability to navigate and orienteer (e.g. pace count, shoot a bearing, orient a map,etc.)	o	o	o	o	o
The ability to identify and practice low impact camping techniques (e.g. LNT)	o	o	o	o	o
The ability to properly use and manage personal gear (e.g. a stove, pack, etc.)	o	o	o	o	o
The ability to set up & manage a rope site	o	o	o	o	o
The ability to build a fire	o	o	o	o	o
The ability to manage a group (facilitate a discussion, make a decision for a group, hold others accountable, etc.)	o	o	o	o	o
The ability to think on your feet	o	o	o	o	o
The ability to manage your own emotions	o	o	o	o	o
The ability to read other people's emotions	o	o	o	o	o
The ability to be assertive	o	o	o	o	o
The ability to resolve conflict	o	o	o	o	o

	Immediately after CORE Current skill level				
	Not Competent (1)	Somewhat Competent (2)	Uncertain (3)	Competent (4)	Highly Competent (5)
The ability to tie different knots (e.g. bowline, double fisherman's)	o	o	o	o	o
The ability to navigate and orienteer (e.g. pace count, shoot a bearing, orient a map,etc.)	o	o	o	o	o
The ability to identify and practice low impact camping techniques (e.g. LNT)	o	o	o	o	o
The ability to properly use and manage personal gear (e.g. a stove, pack, etc.)	o	o	o	o	o
The ability to set up & manage a rope site	o	o	o	o	o
The ability to build a fire	o	o	o	o	o
The ability to manage a group (facilitate a discussion, make a decision for a group, hold others accountable, etc.)	o	o	o	o	o
The ability to think on your feet	o	o	o	o	o
The ability to manage your own emotions	o	o	o	o	o
The ability to read other people's emotions	o	o	o	o	o
The ability to be assertive	o	o	o	o	o
The ability to resolve conflict	o	o	o	o	o

When answering the following questions, select one of the five options that best describes how important the CORE program was in your personal & professional development.

	Not Important (1)	Somewhat Important (2)	Uncertain (3)	Important (4)	Very Important (5)
The ability to effectively communicate	o	o	o	o	o
The ability to feel confident	o	o	o	o	o
The ability to identify your strength and weaknesses	o	o	o	o	o
The ability to develop and maintain relationships	o	o	o	o	o
The ability embrace change	o	o	o	o	o
The ability to live independently	o	o	o	o	o
The ability to work with other people to accomplish a goal	o	o	o	o	o
The ability to work with people with different leadership styles	o	o	o	o	o
The ability to plan and organize	o	o	o	o	o
The ability to network	o	o	o	o	o
The ability to plan for and get the career you want	o	o	o	o	o
The ability to perform skills specific to your job	o	o	o	o	o

What is your gender?
- o Female
- o Male
- o Prefer not to answer

What year were you in CORE?

What was your class standing at the time of your participation in CORE?
- o Freshman
- o Sophomore
- o Junior
- o Senior
- o First Year Masters
- o Second Year Masters
- o Doctorate

Did you participate in or work for IUOA/IMU Outfitters during your time at IU?
- o Yes
- o No

What was your major?
- o Environmental Management
- o Environmental Health

- Epidemiology
- Outdoor Recreation
- Park and Public Lands Management
- Public Health Administration
- Recreation Administration
- Recreational Sport Management
- Recreational Therapy
- Tourism, Hospitality, and Event Management
- Other

Please list the type of jobs you have held since completing the CORE program.

Would you be willing to participate in a phone interview about your CORE experience?
- Yes
- No

Please provide your contact information if you wish to participate in an interview.

Appendix B

Descriptive Statistics for Gender and Technical Skills

Descriptive Statistics

	Gender	Mean	Std. Deviation	N
Before CORE – Knots	1	1.50	.861	30
	2	2.00	1.174	30
	Total	1.75	1.052	60
Before CORE - Navigate and orienteer	1	1.50	.777	30
	2	2.20	1.157	30
	Total	1.85	1.039	60
Before CORE – LNT	1	2.73	1.413	30
	2	3.03	1.299	30
	Total	2.88	1.354	60
Before CORE - Personal gear	1	2.37	1.245	30
	2	3.03	1.326	30
	Total	2.70	1.319	60
Before CORE - Rope site	1	1.37	.718	30
	2	1.47	.937	30
	Total	1.42	.829	60
Before CORE - Fire	1	3.00	1.390	30
	2	3.63	1.098	30
	Total	3.32	1.282	60
After CORE -Knots	1	4.73	.450	30
	2	4.80	.407	30
	Total	4.77	.427	60
After CORE - Navigate and orienteer	1	4.27	.785	30
	2	4.57	.679	30
	Total	4.42	.743	60
After CORE - LNT	1	4.87	.346	30
	2	4.87	.346	30
	Total	4.87	.343	60
After CORE - Personal gear	1	4.87	.346	30
	2	4.70	.466	30
	Total	4.78	.415	60
After CORE - Rope site	1	3.73	.868	30
	2	3.93	.944	30
	Total	3.83	.905	60
After CORE - Fire	1	4.20	.887	30
	2	4.73	.521	30
	Total	4.47	.769	60
Current - Knots	1	3.80	.997	30
	2	3.97	.928	30
	Total	3.88	.958	60

	Gender	Mean	Std. Deviation	N

Current - Navigate and orienteer	1	3.43	1.006	30
	2	4.03	.850	30
	Total	3.73	.972	60
Current - LNT	1	4.87	.346	30
	2	4.67	.479	30
	Total	4.77	.427	60
Current - Personal gear	1	4.77	.504	30
	2	4.67	.479	30
	Total	4.72	.490	60
Current - Rope site	1	3.03	1.326	30
	2	3.23	1.165	30
	Total	3.13	1.241	60
Current - Fire	1	4.33	.922	30
	2	4.47	.937	30
	Total	4.40	.924	60

Appendix C

Gender Descriptive Statistics

	Gender	Mean	Std. Deviation	N
Before CORE - Knots	1	1.50	.861	30
	2	2.00	1.174	30
	Total	1.75	1.052	60
Before CORE - Navigate and orienteer	1	1.50	.777	30
	2	2.20	1.157	30
	Total	1.85	1.039	60
Before CORE - LNT	1	2.73	1.413	30
	2	3.03	1.299	30
	Total	2.88	1.354	60
Before CORE - Personal gear	1	2.37	1.245	30
	2	3.03	1.326	30
	Total	2.70	1.319	60
Before CORE - Rope site	1	1.37	.718	30
	2	1.47	.937	30
	Total	1.42	.829	60
Before CORE - Fire	1	3.00	1.390	30
	2	3.63	1.098	30
	Total	3.32	1.282	60
Before CORE - Manage a group	1	2.43	1.194	30
	2	2.47	1.008	30
	Total	2.45	1.096	60
Before CORE - Think on your feet	1	3.50	1.042	30
	2	3.97	.850	30
	Total	3.73	.972	60
Before CORE - Manage emotions	1	3.40	1.070	30
	2	3.53	.937	30
	Total	3.47	.999	60
	Gender	Mean	Std. Deviation	N
Before CORE - Read Emotions	1	4.00	.983	30
	2	3.70	.794	30
	Total	3.85	.899	60
Before CORE - Assertive	1	3.10	1.398	30
	2	2.73	1.202	30
	Total	2.92	1.306	60
Before CORE - Resolve conflict	1	3.23	1.104	30
	2	3.03	.999	30
	Total	3.13	1.049	60
After CORE –Knots	1	4.73	.450	30
	2	4.80	.407	30
	Total	4.77	.427	60
After CORE - Navigate and orienteer	1	4.27	.785	30
	2	4.57	.679	30

	Total	4.42	.743	60
After CORE - LNT	1	4.87	.346	30
	2	4.87	.346	30
	Total	4.87	.343	60
After CORE - Personal gear	1	4.87	.346	30
	2	4.70	.466	30
	Total	4.78	.415	60
After CORE - Rope site	1	3.73	.868	30
	2	3.93	.944	30
	Total	3.83	.905	60
After CORE - Fire	1	4.20	.887	30
	2	4.73	.521	30
	Total	4.47	.769	60
After CORE - Manage a group	1	3.97	.718	30
	2	4.07	.785	30
	Total	4.02	.748	60
After CORE - Think on your feet	1	4.13	.681	30
	2	4.63	.490	30
	Total	4.38	.640	60
After CORE - Manage emotions	1	3.87	.900	30
	2	4.30	.750	30
	Total	4.08	.850	60
After CORE – Read Emotions	1	4.23	.728	30
	2	4.23	.679	30
	Total	4.23	.698	60

	Gender	Mean	Std. Deviation	N
After CORE - Assertive	1	3.90	.885	30
	2	3.87	.900	30
	Total	3.88	.885	60
After CORE - Resolve conflict	1	3.77	.971	30
	2	3.87	1.042	30
	Total	3.82	1.000	60
Current - Knots	1	3.80	.997	30
	2	3.97	.928	30
	Total	3.88	.958	60
Current - Navigate and orienteer	1	3.43	1.006	30
	2	4.03	.850	30
	Total	3.73	.972	60
Current – LNT	1	4.87	.346	30
	2	4.67	.479	30
	Total	4.77	.427	60

Current - Personal gear	1	4.77	.504	30
	2	4.67	.479	30
	Total	4.72	.490	60
Current - Rope site	1	3.03	1.326	30
	2	3.23	1.165	30
	Total	3.13	1.241	60
Current - Fire	1	4.33	.922	30
	2	4.47	.937	30
	Total	4.40	.924	60
Current - Manage a group	1	4.27	.691	30
	2	4.47	.681	30
	Total	4.37	.688	60
Current - Think on your feet	1	4.37	.615	30
	2	4.77	.430	30
	Total	4.57	.563	60
Current - Manage emotions	1	4.13	.681	30
	2	4.53	.571	30
	Total	4.33	.655	60
Current - Read emotions	1	4.37	.556	30
	2	4.47	.629	30
	Total	4.42	.591	60
Current Level – Assertive	1	4.43	.626	30
	2	4.37	.615	30
	Total	4.40	.616	60

	Gender	Mean	Std. Deviation	N
Current - Resolve conflict	1	4.13	.730	30
	2	4.33	.606	30
	Total	4.23	.673	60
Personal – Communicate	1	4.13	.860	30
	2	3.87	1.042	30
	Total	4.00	.957	60
Personal - Confident	1	4.03	1.245	30
	2	3.83	1.206	30
	Total	3.93	1.219	60
Personal - Strengths and Weaknesses	1	4.10	.995	30
	2	4.27	.944	30
	Total	4.18	.965	60
Personal – Relationships	1	3.03	1.402	30
	2	3.57	1.357	30
	Total	3.30	1.394	60
Personal - Embrace change	1	4.07	1.081	30

	2	3.97	1.402	30
	Total	4.02	1.242	60
Personal - Independently	1	3.63	1.450	30
	2	3.37	1.474	30
	Total	3.50	1.456	60
Professional - Accomplish a goal	1	4.23	.971	30
	2	3.97	1.066	30
	Total	4.10	1.020	60
Professional - Leadership styles	1	4.17	1.085	30
	2	4.20	.925	30
	Total	4.18	1.000	60
Professional - Plan and organize	1	4.13	.973	30
	2	3.80	1.064	30
	Total	3.97	1.025	60
Professional – Network	1	2.97	1.326	30
	2	2.77	1.278	30
	Total	2.87	1.295	60
Professional - Career you want	1	3.47	1.383	30
	2	2.97	1.326	30
	Total	3.22	1.367	60
Professional - Job skills	1	3.57	1.251	30
	2	3.40	1.354	30
	Total	3.48	1.295	60

Appendix D

Class Standing Descriptive Statistics

	Class Standing	Mean	Std. Deviation	N
Before CORE - Knots	1	1.00	.	1
	2	1.70	1.252	10
	3	1.74	.855	31
	4	1.57	1.089	14
	5	2.75	1.708	4
	Total	1.75	1.052	60
Before CORE - Navigate and orienteer	1	1.00	.	1
	2	1.70	1.252	10
	3	1.77	.990	31
	4	1.86	.949	14
	5	3.00	.816	4
	Total	1.85	1.039	60
Before CORE - LNT	1	1.00	.	1
	2	2.40	1.506	10
	3	2.77	1.309	31
	4	3.43	1.222	14
	5	3.50	1.291	4
	Total	2.88	1.354	60
Before CORE - Personal gear	1	2.00	.	1
	2	2.40	1.430	10
	3	2.71	1.442	31
	4	2.71	.994	14
	5	3.50	1.291	4
	Total	2.70	1.319	60
Before CORE - Rope site	1	1.00	.	1
	2	1.20	.422	10

	Class Standing	Mean	Std. Deviation	N
	3	1.52	.926	31
	4	1.14	.363	14
	5	2.25	1.500	4
	Total	1.42	.829	60
Before CORE - Fire	1	2.00	.	1
	2	3.00	1.247	10
	3	3.16	1.293	31
	4	3.79	1.311	14
	5	4.00	.816	4
	Total	3.32	1.282	60
Before CORE - Manage a group	1	1.00	.	1
	2	2.20	.919	10
	3	2.23	.956	31

	4	3.00	1.177	14
	5	3.25	1.500	4
	Total	2.45	1.096	60
Before CORE - Think on your feet	1	2.00	.	1
	2	3.50	1.179	10
	3	3.61	.955	31
	4	4.14	.663	14
	5	4.25	.957	4
	Total	3.73	.972	60
Before CORE - Manage emotions	1	2.00	.	1
	2	3.60	1.075	10
	3	3.29	1.071	31
	4	3.86	.770	14
	5	3.50	.577	4
	Total	3.47	.999	60
Before CORE - Read emotions	1	5.00	.	1
	2	3.80	.919	10
	3	3.68	1.013	31
	4	3.93	.475	14
	5	4.75	.500	4
	Total	3.85	.899	60
Before CORE - Assertive	1	1.00	.	1
	2	2.60	1.350	10

	Class Standing	Mean	Std. Deviation	N
	3	2.81	1.302	31
	4	3.29	1.267	14
	5	3.75	.957	4
	Total	2.92	1.306	60
Before CORE - Resolve conflict	1	2.00	.	1
	2	2.90	1.101	10
	3	2.94	1.063	31
	4	3.50	.855	14
	5	4.25	.500	4
	Total	3.13	1.049	60
After CORE -Knots	1	4.00	.	1
	2	4.90	.316	10
	3	4.74	.445	31
	4	4.79	.426	14
	5	4.75	.500	4
	Total	4.77	.427	60
After CORE - Navigate and	1	4.00	.	1

orienteer	2	4.40	.699	10
	3	4.52	.626	31
	4	4.36	.842	14
	5	4.00	1.414	4
	Total	4.42	.743	60
After CORE - LNT	1	5.00	.	1
	2	4.90	.316	10
	3	4.81	.402	31
	4	5.00	.000	14
	5	4.75	.500	4
	Total	4.87	.343	60
After CORE - Personal gear	1	5.00	.	1
	2	4.80	.422	10
	3	4.77	.425	31
	4	4.71	.469	14
	5	5.00	.000	4
	Total	4.78	.415	60
After CORE - Rope site	1	1.00	.	1
	2	3.80	1.033	10

	Class Standing	Mean	Std. Deviation	N
	3	3.97	.706	31
	4	3.64	.929	14
	5	4.25	.957	4
	Total	3.83	.905	60
After CORE - Fire	1	4.00	.	1
	2	4.60	.966	10
	3	4.39	.667	31
	4	4.71	.611	14
	5	4.00	1.414	4
	Total	4.47	.769	60
After CORE - Manage a group	1	4.00	.	1
	2	3.90	1.197	10
	3	4.06	.442	31
	4	3.93	.997	14
	5	4.25	.500	4
	Total	4.02	.748	60
After CORE - Think on your feet	1	4.00	.	1
	2	4.50	.707	10
	3	4.39	.615	31
	4	4.36	.745	14
	5	4.25	.500	4

	Total	4.38	.640	60
After CORE - Manage emotions	1	3.00	.	1
	2	4.20	1.135	10
	3	4.13	.806	31
	4	4.07	.829	14
	5	3.75	.500	4
	Total	4.08	.850	60
After CORE - Read emotions	1	5.00	.	1
	2	4.10	.738	10
	3	4.26	.682	31
	4	4.29	.469	14
	5	4.00	1.414	4
	Total	4.23	.698	60
After CORE - Assertive	1	3.00	.	1
	2	3.60	1.075	10

	Class Standing	Mean	Std. Deviation	N
	3	3.90	.870	31
	4	4.00	.877	14
	5	4.25	.500	4
	Total	3.88	.885	60
After CORE - Resolve conflict	1	3.00	.	1
	2	3.70	.823	10
	3	3.84	1.068	31
	4	3.86	.949	14
	5	4.00	1.414	4
	Total	3.82	1.000	60
Current - Knots	1	2.00	.	1
	2	3.80	1.135	10
	3	3.77	.990	31
	4	4.14	.663	14
	5	4.50	.577	4
	Total	3.88	.958	60
Current - Navigate and orienteer	1	3.00	.	1
	2	3.50	1.269	10
	3	3.81	.873	31
	4	3.93	.829	14
	5	3.25	1.500	4
	Total	3.73	.972	60
Current - LNT	1	5.00	.	1
	2	4.80	.422	10
	3	4.68	.475	31

	4	4.93	.267	14
	5	4.75	.500	4
	Total	4.77	.427	60
Current - Personal gear	1	4.00	.	1
	2	4.70	.483	10
	3	4.71	.529	31
	4	4.71	.469	14
	5	5.00	.000	4
	Total	4.72	.490	60
Current - Rope site	1	1.00	.	1
	2	3.20	1.135	10

	Class Standing	Mean	Std. Deviation	N
	3	3.23	1.146	31
	4	2.93	1.492	14
	5	3.50	1.291	4
	Total	3.13	1.241	60
Current - Fire	1	3.00	.	1
	2	4.70	.483	10
	3	4.16	1.098	31
	4	4.79	.579	14
	5	4.50	.577	4
	Total	4.40	.924	60
Current - Manage a group	1	4.00	.	1
	2	4.40	.699	10
	3	4.29	.739	31
	4	4.50	.650	14
	5	4.50	.577	4
	Total	4.37	.688	60
Current - Think on your feet	1	4.00	.	1
	2	4.60	.699	10
	3	4.58	.502	31
	4	4.50	.650	14
	5	4.75	.500	4
	Total	4.57	.563	60
Current - Manage emotions	1	3.00	.	1
	2	4.60	.699	10
	3	4.26	.682	31
	4	4.43	.514	14
	5	4.25	.500	4
	Total	4.33	.655	60
Current - Read emotions	1	4.00	.	1

	2	4.30	.675	10
	3	4.42	.564	31
	4	4.50	.650	14
	5	4.50	.577	4
	Total	4.42	.591	60
Current Level - Assertive	1	3.00	.	1
	2	4.40	.699	10

	Class Standing	Mean	Std. Deviation	N
	3	4.35	.608	31
	4	4.57	.514	14
	5	4.50	.577	4
	Total	4.40	.616	60
Current - Resolve conflict	1	3.00	.	1
	2	4.20	.422	10
	3	4.16	.735	31
	4	4.43	.646	14
	5	4.50	.577	4
	Total	4.23	.673	60
Personal - Communicate	1	4.00	.	1
	2	3.60	1.075	10
	3	4.06	.998	31
	4	4.00	.877	14
	5	4.50	.577	4
	Total	4.00	.957	60
Personal - Confident	1	5.00	.	1
	2	3.60	1.430	10
	3	4.10	1.248	31
	4	3.64	1.151	14
	5	4.25	.500	4
	Total	3.93	1.219	60
Personal - Strengths and weaknesses	1	4.00	.	1
	2	4.50	.527	10
	3	4.26	1.032	31
	4	3.79	1.122	14
	5	4.25	.500	4
	Total	4.18	.965	60
Personal – Relationships	1	4.00	.	1
	2	3.50	1.354	10
	3	3.26	1.413	31
	4	2.93	1.492	14
	5	4.25	.957	4

	Total	3.30	1.394	60
Personal - Embrace change	1	5.00	.	1
	2	4.30	1.252	10

	Class Standing	Mean	Std. Deviation	N
	3	3.55	1.312	31
	4	2.57	1.399	14
	5	3.50	1.000	4
	Total	3.22	1.367	60
Professional - Job skills	1	4.00	.	1
	2	3.50	1.269	10
	3	3.58	1.311	31
	4	3.21	1.424	14
	5	3.50	1.291	4
	Total	3.48	1.295	60

Appendix E

Major Descriptive Statistics

	Major	Mean	Std. Deviation	N
Before CORE - Knots	1	2.25	1.500	4
	4	1.90	1.106	31
	9	1.00	.	1
	10	1.50	.707	2
	11	1.55	.912	22
	Total	1.75	1.060	60
Before CORE - Navigate and orienteer	1	2.25	1.258	4
	4	2.32	1.216	31
	9	1.00	.	1
	10	2.00	1.414	2
	11	2.23	1.020	22
	Total	2.22	1.179	60
Before CORE - Fire	1	4.00	.816	4
	4	3.71	1.006	31
	9	5.00	.	1
	10	4.50	.707	2
	11	3.68	.995	22
	Total	3.85	1.029	60
Before CORE - LNT	1	3.00	1.826	4
	4	3.77	1.445	31
	9	4.00	.	1
	10	3.50	2.121	2
	11	3.23	1.087	22
	Total	3.53	1.287	60
Before CORE - Manage a group	1	3.00	1.155	4
	4	2.58	.992	31
	9	2.00	.	1
	10	2.50	.707	2
	11	2.59	1.333	22
	Total	2.68	1.054	60
Before CORE - Personal gear	1	3.00	1.155	4
	4	2.29	1.025	31
	9	2.00	.	1
	10	2.50	.707	2
	11	2.45	1.299	22
	Total	2.40	1.090	60
Before CORE - Think on your feet	1	4.00	.816	4
	4	3.90	.944	31
	9	5.00	.	1
	10	3.50	.707	2
	11	3.27	1.162	22
	Total	3.70	1.009	60
Before CORE - Manage emotions	1	3.75	.500	4
	4	3.39	.989	31
	9	5.00	.	1
	10	1.00	.000	2
	11	3.55	1.011	22
	Total	3.73	.972	60
Before CORE - Rope site	1	2.00	1.414	4
	4	1.45	.850	31
	9	1.00	.	1
	10	4.50	.707	2
	11	3.36	1.049	22
	Total	3.47	.999	60
Before CORE - Read emotions	1	4.25	.500	4
	4	3.84	.860	31
	9	5.00	.	1
	10	2.00	.000	2
	11	1.32	.716	22
	Total	1.42	.829	60
Before CORE - Assertive	1	3.50	1.732	4
	4	2.87	1.204	31
	9	3.00	.	1

	11	2.77	1.445	22
	Total	3.32	1.282	60
Before CORE - Manage a group	1	3.75	1.258	4
	4	2.58	.992	31
	9	1.00	.	1
	10	1.00	.000	2
	11	2.23	1.020	22
	Total	2.45	1.096	60
Before CORE - Think on your feet	1	4.00	.816	4
	4	3.90	.944	31
	9	2.00	.	1
	10	3.50	.707	2
	11	3.55	1.011	22
	Total	3.73	.972	60
Before CORE - Manage emotions	1	3.75	.500	4
	4	3.39	.989	31
	9	5.00	.	1
	10	4.50	.707	2
	11	3.36	1.049	22
	Total	3.47	.999	60
Before CORE - Read emotions	1	4.25	.500	4
	4	3.84	.860	31
	9	5.00	.	1
	10	4.50	.707	2
	11	3.68	.995	22
	Total	3.85	.899	60
Before CORE - Assertive	1	3.50	1.732	4
	4	2.87	1.204	31
	9	3.00	.	1

	Major	Mean	Std. Deviation	N
	10	3.50	.707	2
	11	2.82	1.468	22
	Total	2.92	1.306	60
Before CORE - Resolve conflict	1	4.00	.816	4
	4	3.16	1.036	31
	9	3.00	.	1
	10	4.00	.000	2
	11	2.86	1.082	22
	Total	3.13	1.049	60
After CORE -Knots	1	4.75	.500	4

	4	4.81	.402	31
	9	5.00	.	1
	10	5.00	.000	2
	11	4.68	.477	22
	Total	4.77	.427	60
After CORE - Navigate and Orienteer	1	4.75	.500	4
	4	4.35	.839	31
	9	5.00	.	1
	10	4.50	.707	2
	11	4.41	.666	22
	Total	4.42	.743	60
After CORE - LNT	1	4.75	.500	4
	4	4.87	.341	31
	9	5.00	.	1
	10	5.00	.000	2
	11	4.86	.351	22
	Total	4.87	.343	60
After CORE - Personal gear	1	4.75	.500	4
	4	4.77	.425	31
	9	5.00	.	1
	10	5.00	.000	2
	11	4.77	.429	22
	Total	4.78	.415	60
After CORE - Rope site	1	4.00	.000	4
	4	3.84	.934	31
	9	4.00	.	1
	10	5.00	.000	2
	11	3.68	.945	22
	Total	3.83	.905	60

	Major	Mean	Std. Deviation	N
After CORE - Fire	1	4.50	.577	4
	4	4.61	.667	31
	9	5.00	.	1
	10	4.00	1.414	2
	11	4.27	.883	22
	Total	4.47	.769	60
After CORE - Manage a group	1	4.75	.500	4
	4	3.94	.854	31
	9	4.00	.	1
	10	4.50	.707	2

	11	3.95	.575	22
	Total	4.02	.748	60
After CORE - Think on your feet	1	4.50	.577	4
	4	4.42	.620	31
	9	4.00	.	1
	10	4.50	.707	2
	11	4.32	.716	22
	Total	4.38	.640	60
After CORE - Manage emotions	1	4.00	.816	4
	4	3.97	.912	31
	9	5.00	.	1
	10	5.00	.000	2
	11	4.14	.774	22
	Total	4.08	.850	60
After CORE - Read emotions	1	4.50	.577	4
	4	4.19	.703	31
	9	5.00	.	1
	10	4.50	.707	2
	11	4.18	.733	22
	Total	4.23	.698	60
After CORE - Assertive	1	4.25	.957	4
	4	3.65	.950	31
	9	4.00	.	1
	10	4.50	.707	2
	11	4.09	.750	22
	Total	3.88	.885	60
After CORE - Resolve conflict	1	4.00	.816	4
	4	3.81	1.108	31
	9	4.00	.	1

	Major	Mean	Std. Deviation	N
	10	4.00	.000	2
	11	3.77	.973	22
	Total	3.82	1.000	60
Current - Knots	1	4.25	.957	4
	4	3.94	.854	31
	9	4.00	.	1
	10	3.50	2.121	2
	11	3.77	1.066	22
	Total	3.88	.958	60
Current - Navigate and	1	4.00	.000	4

orienteer	4	3.84	.898	31
	9	4.00	.	1
	10	2.00	.000	2
	11	3.68	1.086	22
	Total	3.73	.972	60
Current - LNT	1	5.00	.000	4
	4	4.71	.461	31
	9	5.00	.	1
	10	5.00	.000	2
	11	4.77	.429	22
	Total	4.77	.427	60
Current - Personal gear	1	4.75	.500	4
	4	4.68	.541	31
	9	5.00	.	1
	10	4.50	.707	2
	11	4.77	.429	22
	Total	4.72	.490	60
Current - Rope site	1	4.00	.816	4
	4	3.16	1.098	31
	9	3.00	.	1
	10	3.00	1.414	2
	11	2.95	1.495	22
	Total	3.13	1.241	60
Current - Fire	1	4.50	.577	4
	4	4.58	.672	31
	9	5.00	.	1
	10	3.50	2.121	2
	11	4.18	1.140	22
	Total	4.40	.924	60

	Major	Mean	Std. Deviation	N
Current - Manage a group	1	4.75	.500	4
	4	4.52	.626	31
	9	5.00	.	1
	10	4.00	.000	2
	11	4.09	.750	22
	Total	4.37	.688	60
Current - Think on your feet	1	4.75	.500	4
	4	4.61	.558	31
	9	5.00	.	1
	10	4.50	.707	2

	11	4.45	.596	22
	Total	4.57	.563	60
Current - Manage emotions	1	4.00	.816	4
	4	4.42	.620	31
	9	5.00	.	1
	10	5.00	.000	2
	11	4.18	.664	22
	Total	4.33	.655	60
Current - Read emotions	1	4.75	.500	4
	4	4.45	.624	31
	9	5.00	.	1
	10	4.50	.707	2
	11	4.27	.550	22
	Total	4.42	.591	60
Current Level - Assertive	1	4.50	.577	4
	4	4.42	.564	31
	9	5.00	.	1
	10	4.50	.707	2
	11	4.32	.716	22
	Total	4.40	.616	60
Current - Resolve conflict	1	4.25	.500	4
	4	4.26	.729	31
	9	5.00	.	1
	10	4.00	.000	2
	11	4.18	.664	22
	Total	4.23	.673	60
Personal - Communicate	1	4.00	.000	4
	4	3.97	1.016	31
	9	5.00	.	1

	Major	Mean	Std. Deviation	N
	10	4.00	.000	2
	11	4.00	1.024	22
	Total	4.00	.957	60
Personal - Confident	1	3.25	.957	4
	4	3.90	1.165	31
	9	5.00	.	1
	10	4.00	.000	2
	11	4.05	1.397	22
	Total	3.93	1.219	60
Personal - Strengths and	1	4.00	.816	4

weaknesses	4	4.19	.980	31
	9	5.00	.	1
	10	4.50	.707	2
	11	4.14	1.037	22
	Total	4.18	.965	60
Personal – Relationships	1	3.50	1.000	4
	4	3.45	1.457	31
	9	5.00	.	1
	10	2.50	.707	2
	11	3.05	1.397	22
	Total	3.30	1.394	60
Personal - Embrace change	1	3.50	1.291	4
	4	4.16	1.267	31
	9	5.00	.	1
	10	3.00	1.414	2
	11	3.95	1.214	22
	Total	4.02	1.242	60
Personal - Independently	1	2.75	.957	4
	4	3.55	1.457	31
	9	4.00	.	1
	10	3.50	2.121	2
	11	3.55	1.565	22
	Total	3.50	1.456	60
Professional - Accomplish a goal	1	4.00	.000	4
	4	3.97	1.080	31
	9	5.00	.	1
	10	4.50	.707	2
	11	4.23	1.066	22
	Total	4.10	1.020	60

	Major	Mean	Std. Deviation	N
Professional - Leadership styles	1	3.50	1.000	4
	4	4.23	1.023	31
	9	5.00	.	1
	10	4.50	.707	2
	11	4.18	1.006	22
	Total	4.18	1.000	60
Professional - Plan and organize	1	3.00	.816	4
	4	4.13	.885	31
	9	5.00	.	1
	10	3.50	.707	2

	11	3.91	1.192	22
	Total	3.97	1.025	60
Professional - Network	1	2.00	.816	4
	4	2.97	1.329	31
	9	4.00	.	1
	10	3.00	2.828	2
	11	2.82	1.220	22
	Total	2.87	1.295	60
Professional - Career you want	1	3.50	.577	4
	4	3.39	1.430	31
	9	4.00	.	1
	10	2.50	2.121	2
	11	2.95	1.362	22
	Total	3.22	1.367	60
Professional - Job skills	1	4.25	.500	4
	4	3.74	1.237	31
	9	4.00	.	1
	10	3.00	1.414	2
	11	3.00	1.380	22
	Total	3.48	1.295	60